



BY PETER BISHOP

# Community chest

**For several months (or is it years?) my wife has been asking for a blanket chest in which to store out-of-season bedding. Finding a bit of time on my hands recently, I decided I'd make her a solid oak coffer and do the job properly!**

To be honest, there was another bit of an incentive to build this piece. I'd bought an expensive router cutter in readiness for a jointing job that didn't happen, and I wanted to see how it worked. So with that excuse at the ready, I was able to design this project in a slightly different way.

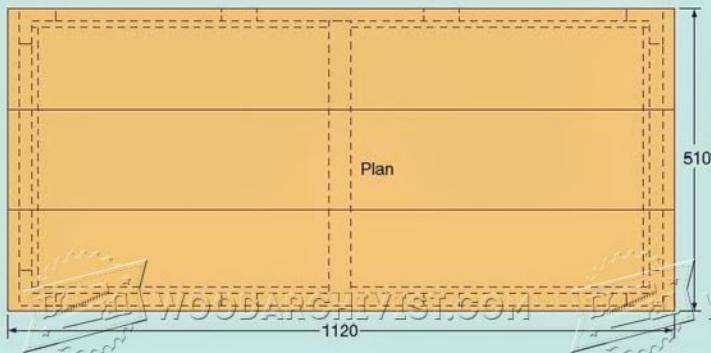
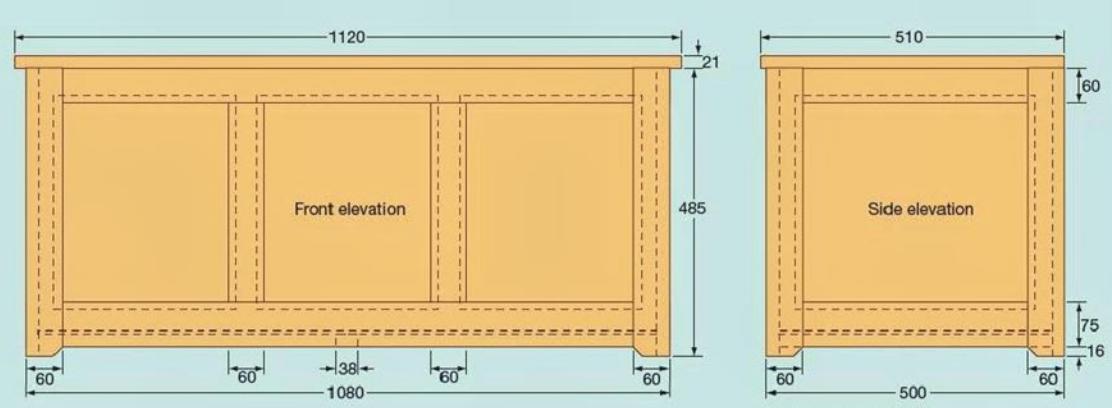
#### Preparing the parts

With some thick planks of waney-edged kiln-dried English oak in hand, I soon had the components marked out, photo 1. I then sawed them to nominal sizes, end-sealed them (photo 2) and stored them inside the house for a couple of weeks to acclimatise.

Once all the framing and lid components were ready, they went back into the workshop to be planed to size, photo 3, and to have their edges squared, photo 4. I took some trouble over this, as I wanted to make the corners of the chest out of two right-angled components rather than the traditional square post. To make the legs appear solid, I planned to use a cunning router cutter called a mitre lock jointer, photo 5.

#### Mitre magic

This forms a tongue and a groove on each mitred edge. You can reassemble these in the flat – at 180° to each other – as a



When marking out the various components, take care to avoid knots and splits

#### BLANKET CHEST CUTTING LIST

All dimensions are in millimetres

Part	Qty	L	W	T
Top	1	1120	510	21
Leg	8	500	60	21
Long upper rail	2	1080	60	21
Short upper rail	2	500	60	21
Long lower rail	2	1080	75	21
Short lower rail	2	500	75	21
Muntin	4	380	60	21
Front/back panel	6	370	300	8
End panel	2	370	400	8
Base panel (mdf)	1	1200	600	6
Bottom brace	1	500	38	21

An allowance has been made on all the lengths for cutting joints.

You will also need some 25mm sq softwood battens to support the base panel, and two brass butt hinges, two screw eyes and a short length of chain to secure the lid.



Prepare the rough-sawn components, then seal all the ends to prevent splitting



Any 'misses' that occur during surfacing can be removed during the thicknessing stage

variation on a tongued-and-grooved edge joint, although you wouldn't buy this relatively expensive cutter just to do this! The magic appears when you join them at right angles; then the mitred edges interlock to leave an external corner that looks just like solid wood.

To machine the components on the router table, one piece is passed over the cutter flat to the bed, and the other flat to the fence. A little bit of trial and error with some offcuts of the same thickness eventually produced a good joint for me. It was time to machine the eight pieces that would form my four legs.

As long as the joint is strong enough, there are some advantages in creating a right-angled corner rather than using a square post. Firstly you don't use so much wood and, secondly, the rectangular base panel doesn't need to be notched to fit round the corner posts.

#### Making the corner joints

I assembled the legs by applying PVA glue to the abutting faces and clamping them up. The critical points here are to make sure that all the excess glue is squeezed out of the joint, and that each corner is a perfect right angle on the outside faces once it's clamped up, photo 6.

I'd deliberately finished the eight corner components slightly wider and longer than required. Once the glue had gone off I then planed each L-shaped post to its finished width to match the top rails, photo 7, and trimmed it to length. Now they were ready to be marked out for their joints, photo 8, which I did with the four leg assemblies laid side by side for accuracy.

#### Cutting the mortises

I set the width of the mortises to match the thickness of the panels. This meant that when the grooves for the panels were cut, the recess for a haunch on the tenons would be formed automatically. Each mortise must be cut parallel to the outside face. So in a mortising machine, the clamping action must force this face against the back fence, photo 9. Cut all the mortises and set the legs aside for now.

#### Panel imitations

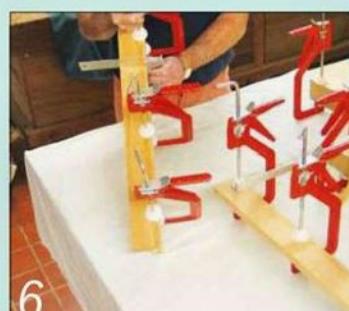
I didn't have enough solid oak for the panels, so I decided to try another cunning technique. I had a quantity of 4mm thick oak-faced mdf offcuts kicking around from another recent job. With oak on one face only, I decided to stick two pieces together to make flat panels 8mm thick. I spread a generous quantity of PVA glue on the face



Square the edges carefully in preparation for making the L-shaped legs



I planned to use this cunning router cutter, called a mitre lock jointer, to assemble the legs



Each two-part leg assembly is glued, clamped up and checked for square



Plane the oversize legs to their finished size and then cut them to length



Mark out the mortise hole positions on the four legs in one operation



Position each leg on the mortiser so that the slots are cut in the same place

of one panel, photo 10, and then rubbed the other into it. Each panel was then pressed down with heavy weights, but as their numbers were limited I could tackle only a couple of panels at a time. I needed eight in all...

Before you go any further, now is the time to rout out the 8mm wide grooves on all the components to accept the edges of these laminated panels. Mark all the edges that need a groove clearly so you don't make a mistake, and then cut all the grooves on the router table.

#### A dry assembly

With the legs already mortised, I formed matching tenons on the ends of the eight top and bottom rails and trimmed them to fit. I could now dry-assemble the frame of the chest and work out the exact positions of the four muntins at the front and rear. I also marked out the position of the bottom brace that would support the centre of the plywood base panel, and determined its length including an allowance for a tenon on each end.

This done, I cut the mortise holes on the long top and bottom rails and tenoned the



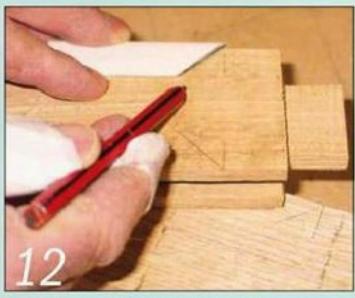
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Prepare the panels by gluing one surface and rubbing the other onto it



11

Dry-assemble the chest and mark the positions of the frame chamfers



12

Use a simple template to mark out the 45° ends of the chamfers



13

Cut the panels to size, then assemble the front and back sections



14

Complete the chest carcase by fitting the end rails and panels in place



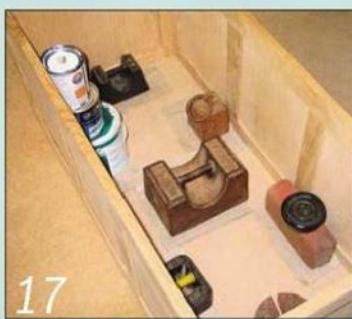
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Screw and glue softwood battens to the lower rails to support the base panel



16

Mark the dimensions of the base panel from underneath and cut it to size



17

Spread glue on all the battens, fit the base panel and weight it down

muttins to fit, along with the bottom brace. Another dry assembly, just to check, also gave me the opportunity to measure the size of the side and end panels. These were cut to size, plus an allowance for them to fit into the grooves in the panel frames, and then everything was cleaned up ready for assembly for real.

#### Optional chamfers

By the way, if you want to chamfer the edges of the panel frames, now's the time to do it. Mark the positions of the chamfer stop ends on each dry-assembled frame with a spacer to get them all the same, photo 11. Then use another small plastic template to mark the ends of the chamfers at 45°, photo 12. Form the chamfers on the router table and neaten the stop ends with a sharp chisel.

#### Assembly time

I glued up the front and rear panel assemblies first, photo 13. The joints went together sweetly without too much pressure, and I checked that the frame was square overall. The other important thing to check is that the legs haven't gone out of square. Some adjustment to the packing for the sash cramps might be necessary to ensure this doesn't happen.

Later, these two panel assemblies were cleaned up and were then linked by the end rails with the end panels located in their grooves, photo 14. Don't forget to put the bottom brace in as you do the assembly; I nearly did! Once the glue was dry, the whole lot was cleaned up ready for finishing.

#### Adding the base

Pieces of slim softwood batten were then glued and screwed in place around the inside of the bottom rails, photo 15, to support the rectangular base panel. You can see clearly here how my L-shaped legs avoid the need to notch the corners of the base. I used a piece of 6mm thick mdf, photo 16, marking it out from underneath. After cutting it to size I applied glue along all the battens and on the bottom brace, dropped the panel in place and weighted it down for a few hours to secure it, photo 17.

#### Making up the top

While all this had been going on, I'd made the top out of three pieces of oak. These were planed with square edges, biscuit-jointed (photo 18), glued and rubbed together and then cramped up, photo 19. Later I cleaned off all the excess glue, applied filler as required and sanded the surface smooth.

With the chest carcase completed I could work out the finished size of the top. I sliced a strip off one long edge and planed that square. Then I marked the width required and made the second long edge cut working freehand on the bench saw, **photo 20**. This edge was again planed square; then I trimmed the top off to the required length.

#### Finishing time

I decided to use an acrylic non-yellowing satin finish on the chest. This is great stuff to apply, but unfortunately it always raises the grain more than an oil- or polyurethane-based finish. This meant that each coat had to be sanded well back before the next was applied. I applied four coats to the top panel before I was satisfied with its final appearance; just three coats made a good job of the body of the chest.

#### Selecting the hardware

A trip to B & Q sourced a pack of three decent brass hinges 75mm long, a length of fine brass chain and some strong screw-in eyes. I fitted the three hinges to the top first. Having marked their positions, I set a straight cutter in my router and removed the bulk of the waste to a depth of about 3mm. I cut the rest by hand, then fitted and fixed each hinge.

Next I put the top onto the main body of the chest free, not fixed, and positioned it where I wanted it. I marked the extremities of each hinge on the back rail and removed the top. I then cut the ends of the hinge recesses using a fine saw and a square, **photo 21**, and chopped out the waste with a chisel, **photo 22**. Once the recesses were finished, I placed the top safely on some supports alongside the chest so I could align the hinges with their recesses and drive in the screws. Pilot holes and a little grease on each screw make sure they go in smoothly, **photo 23**.

#### Adding the safety chain

The chain, about 500mm long, and the screw-in eyes are essential to stop the top from going too far over the back of the chest and straining the hinges. I opened up each eye by holding the threaded end in a vice and inserting a flat-tip screwdriver blade into the closed loop. I then fitted one end of the chain into the first eye and squeezed it closed again. This was the eye to go in the top. I worked out its position and screwed it in, making sure that it was clear of the side rail when the lid closed. I then attached the second eye to the side of the chest, hooked the chain on and closed the eye, **photo 24**. Job done, and I was back in my wife's good books!



18

The planked top is jointed up from a number of pieces using biscuits



19

Rub the joints and cramp the top up from both sides to keep it flat



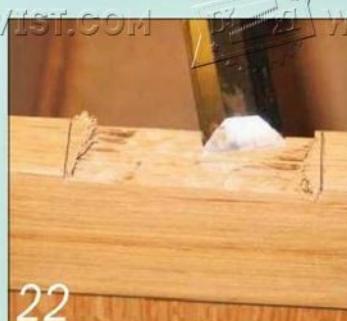
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Cut the top to width on the bench saw and square the edges



21

Mark the hinge positions and cut the ends of the recesses with a saw



22

Chop out the waste from each hinge recess using a sharp chisel



23

Applying a little grease to each screw thread helps them to drive in easily



24

Fit the eyes and chain to one (or both) sides to stop the top opening too far

